Settlement Recalculation Threshold (SRT)

Report to the Regulatory Authorities

12/06/2026

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Contents

Glossary

Terms & Acronyms	Definition
SEM	Single Electricity Market
SEMO	Single Electricity Market Operator
MO	Market Operator
TSC	Trading & Settlement Code
SRT	Settlement Recalculation Threshold
MDP	Meter Data Provider(s)
EDP	External Data Provider(s)
AP	Agreed Procedures
IP	Instruction Profiling
SQ	Settlement Query
SRA	Settlement Reallocation Arrangements
PT	Market Participant
Q	Quarter of Financial Year
CSO	Central Statistics Office
BETTA	British Electricity Trading & Transmission Arrangements
D+1	Indicative Settlement
D+4	Initial Settlement
Ad Hoc	Non-Timetabled Settlement Rerun
M+4	Settlement Rerun conducted four months following the relevant billing period.
M+13	Settlement Rerun conducted thirteen months following the relevant billing period.

1. Background

1.1. Overview

Under paragraph B.19.3.1 of the Trading and Settlement Code (TSC), the Market Operator (MO) is responsible for proposing, from time to time, the parameters used to determine when Settlement Reruns should occur, and submitting these to the Regulatory Authorities. This document outlines the methodology used to develop the MO's proposal for one such parameter: the Settlement Recalculation Threshold (SRT).

The Single Electricity Market Operator (SEMO) is responsible for administering the Single Electricity Market (SEM), including calculating payments and charges for registered market participants. These calculations are carried out through Timetabled Settlement Runs, which produce Settlement Documents for each participant. In accordance with the Settlement Calendar, SEMO perform a series of scheduled Settlement Reruns to maintain the integrity and reliability of data for market settlement purposes. The Initial settlement (D+4) is performed using the most recently obtained data provided by the relevant external data providers (EDP). The M+4 Settlement Rerun incorporates updated metering and any other corrected data inputs. The M+13 Settlement Rerun typically incorporates more enhanced data accuracy for market settlement. Any further settlement adjustments would require an Ad Hoc (AH) Settlement Rerun. In such instances, the MO is obligated to conduct an Ad Hoc Settlement Rerun if a market participant has raised a Settlement Query (TSC G.3) and the estimated financial impact exceeds the SRT for the relevant Settlement Statement. Settlement Reruns are intended to enhance market settlement as improved data becomes available, while also providing a structured framework for incorporating corrections arising from Settlement Queries and revised data inputs.

The SRT determines whether the MO should include corrected data (arising from a query and/or dispute) in a scheduled Settlement Rerun, or whether an Ad Hoc Settlement Rerun is required after the final Timetabled Scheduled Run has already taken place. It mainly applies to items that sit outside 'standard resettlement processing'.

Standard resettlement processing refers to Settlement Reruns carried out in accordance with the predefined Settlement Calendar, as set out under G.2.4.1 of the TSC. This includes scheduled metering updates provided by Meter Data Providers (MDP) in line with timing principles, defined in Agreed Procedure 16 'Provision of Meter Data'. The Settlement Calendar, as outlined in TSC G.2.4, specifies the requirements for MDPs with reference to the provision of data to facilitate the MO in conducting the Timetabled Settlement Runs. Timetabled Settlement Runs are D+1, D+4, M+4 and M+13. For that reason, all settlement queries relating to metering data specifically are not assessed against the SRT value until all scheduled settlement has concluded for the billing period(s) in question. For example:

- Meter data corrections are part of standard resettlement processing, and any updates are automatically included in Timetabled Scheduled Runs. The SRT does not apply to upheld Settlement Queries where updated metering data is to be applied in a Settlement Rerun unless the Settlement Query is raised after the final Timetabled Settlement Run (M+13). The reason being that upon completion of M+13 the Timetabled Settlement Runs have concluded and the MDPs have no further obligation to provide updated metering data to the MO as per the Settlement Calendar.

- Instruction Profiling (IP) is not part of standard resettlement processing, so any corrections must always be assessed against the SRT to decide whether they should be included.

As per G.3.2.8 in the Trading and Settlement Code, in the event that the MO in resolving a Settlement Query determines that changes to the relevant Settlement Statement or Settlement Document are greater than the SRT, the MO shall procure that:

a) the relevant Settlement Items will be recalculated or adjusted for the affected periods; and

b) a Settlement Rerun shall then be undertaken.

Additionally, and as per G.3.2.10 in the Trading and Settlement Code, any changes to Settlement resulting from a Settlement Query greater than the SRT, shall fall into one of the two following categories:

a) change to Settlement Items with Low Materiality; or

b) change to Settlement Items with High Materiality.

Furthermore, as per Agreed Procedure 13 2.4 'Corrective Actions':

a) In the event that there is a change to Settlement Items with Low Materiality resolved prior to the final Timetabled Settlement Rerun, the MO shall procure that the revised corrected input data shall be used for the relevant Settlement Period for which Final Settlement has not occurred, and Settlement shall then take place on the next Timetabled Settlement Rerun.

b) In the event that there is a change to Settlement Items with Low Materiality resolved after the final Timetabled Settlement Rerun; or Settlement Items with High Materiality the MO will procure that an additional Settlement Rerun for the relevant Settlement Period will be performed.

The High Materiality Threshold is a benchmark used to determine the necessary obligations of the MO for undertaking a Settlement Rerun. As per 2.3 'Determinations of Settlement Query Materiality' in Agreed Procedure 13, High Materiality is deemed to be a settlement change estimated to be equal to or over €50,000 in respect of a single Settlement Statement. While the SRT determines whether a change is significant enough to include in a Settlement Rerun, the High Materiality Threshold identifies changes large enough to justify the MO procuring an additional Settlement Rerun to incorporate revised data in market settlement. If exceeded, the MO must initiate an Ad Hoc Settlement Rerun rather than waiting for the next scheduled run. This ensures that settlement issues with a substantial financial impact are corrected in a timelier manner, reducing risk and exposure for market participants and maintaining confidence in settlement accuracy.

Differences arising from Upheld Settlement Queries are scheduled for a Settlement Rerun as follows:

1. Differences below €15,000 specifically related to metering data where the Timetabled Settlement Runs have not yet concluded (i.e. up to M+13). These items are included in the next Timetabled Settlement Rerun (M+4 or M+13). No IP run required.

2. Differences below €15,000 due to updated data other than metering – no requirement for the MO to undertake or incorporate updated data in a Settlement Rerun.

3. Differences greater than €15,000 and below €50,000 – included in next Timetabled Settlement Run (M+4 or M+13), or an Ad Hoc following M+13. IP run may be required for M+4 or M+13 if data updates are not related to metering. IP run may be required for Ad Hoc following M+13.

4. Differences above €50,000. Ad Hoc Settlement Rerun required. IP run may be required.

1.2 Previous Methodologies

1.2.1 SRT Review (2017)

The 2017 review paper 'Recommended Values for I-SEM Imbalance Settlement Parameters' anticipated that changes in settlement data were going to be largely confined to market participants in the planned SEM arrangements. In lieu of this, greater emphasis was placed on the SRT value being applied at a participant level whilst noting that Settlement Reruns were still conducted on a market wide basis. It was considered appropriate that the application of the SRT value should only consider the settlement amounts of the impacted participant who raised the Settlement Query. However, the proposed SRT value should reflect the impact that a Settlement Rerun would have on the impacted participant in addition to the administrative costs for all SEM participants that would be incurred from the MO undertaking a Settlement Rerun.

In determining an appropriate SRT value, several key considerations arose. These included the benefit to the participant raising the query, the extent to which changes after the M+13 Settlement Rerun would be significant enough to justify an Ad Hoc Settlement Rerun, and the likelihood of such changes occurring. This required balancing the financial value of corrections against the administrative and operational costs imposed on both the affected participant and the wider market. Importantly, the SRT would also need to recognise differences in participant size. Smaller participants may experience a more material impact from relatively small settlement changes, while larger participants may not. As a result, the SRT should be set low enough to capture meaningful impacts for smaller participants, but high enough to avoid unnecessary Settlement Reruns and associated costs for the market. Given these considerations, it was determined in the 2017 recommendation paper that it was unlikely that there is a "universal value" that will perfectly meet all objectives, and any chosen SRT would represent a pragmatic balance.

A useful comparison was drawn from the BETTA market in Great Britain, where a £3,000 materiality threshold was being used for trading disputes. This value was derived from an estimate of the cost of investigating and resolving disputes, based on resource requirements and associated administrative costs.

By applying a similar approach as part of the SEM design, estimating the cost of carrying out a Settlement Rerun provided a practical lower bound for the threshold. This ensured that reruns would only be initiated where the benefit of correcting settlement outcomes outweighed the cost and effort involved, supporting an efficient and proportionate process.

In 2017, the following assumptions were considered for such a rough estimate of the costs of a Settlement Rerun resulting from a change in Meter Data:

- A resource costing €300 per day;
- 60 invoices being issued to participants in the market;
- The following activities being carried out by External Data Providers, with an estimate of the time required:
    a) Provide Corrected Data (4 hours).
- The following activities being carried out by the MO, with an estimate of the time required:
    a) Settlement runs (20 hours for energy settlement, 20 hours for capacity settlement);
    b) Corporate finance checks (1 hour);
    c) Authorisation of payments (3 hours);

d) Bank charges (€5 by 60 invoices);

e) Funds transfer processing (12 hours).

- The following activities being carried out by each Participant, with an estimate of the time required:

  a) Downloading settlement documents (1 hour);

  b) Reconciling invoices (2 hours);

  c) Create and authorise payments (1 hour);

  d) Bank charges (€5 by 60 invoices).

With the assumptions stated, the following costs would result across the market:

- External Data Provider, €150;

- Market Operator, €2,400;

- Participants, €9,300.

Resulting in a total of roughly €11,850, excluding the cost of progressing the underlying dispute or query process. While indicative, this demonstrated that the order of magnitude for market-wide Settlement Rerun costs would be approximately €10,000.

This estimate was useful in informing the minimum level at which the SRT should be set, ensuring that the benefits of a Settlement Rerun outweighed the administrative costs. The threshold was also considered alongside the High Materiality Threshold, as setting it above that level would result in all qualifying queries and/or disputes triggering Ad Hoc runs. Accordingly, it was determined that an appropriate range for the threshold would be between €10,000 and €50,000. Given the importance of capturing meaningful corrections for smaller participants, a value towards the lower end of this range was considered most appropriate, provided it remained above the estimated cost of administering a Settlement Rerun. A value of €15,000 was recommended to be implemented for the SEM from the 1st of October 2018. While the recommendation was ratified in the SEMC decision paper SEM-017-034, the application of the SRT for Settlement Queries commenced on the 28th of March 2022.

2. Considerations

The MO believes the primary factors in setting the SRT threshold should remain a comparison between the High Materiality Threshold defined in the Trading and Settlement Code (as an upper bound) and the cost of administering a Settlement Rerun across the market (as a lower bound). Within these bounds, the final value should be determined through informed judgement, considering empirical evidence and the balance between participant impact and administrative cost.

2.1. Inflation, market and system changes

The cost assumptions in the 2017 analysis need to be updated to reflect current conditions:

- Labour-related costs using SEMO resourcing costs - consistent with other recent regulatory submissions - and CSO earnings data to reflect changes in market remuneration levels since 2017.
- Bank charges inflation / market-rate adjusted.
- Process assumptions (time and activities) based on automation, system improvements, complexity.
- Structural assumptions, such as the number of participants, based on current market conditions.

This approach ensures that the updated estimate reflects current cost levels while maintaining consistency with the original methodology.

2.1.1. Labour costs

Using CSO average weekly earnings as a proxy for labour cost growth, average weekly earnings increased from €724.44 in Q1 2017 to €1,074.61 in Q1 2026. This represents an increase of approximately 48.3%. Applying that increase to a daily resource cost of €300 in 2017 gives an updated equivalent cost of approximately €445 per day in Q1 2026.

The SEMO 2024 – 2029 Price Control used an average salary of €83.5K p.a. per FTE for the purposes of calculating Core Labour opex allowance.

Calculation of Blended Day Rate	SEMO
FTE rate (2023 Monies)	€83,500
FTE rate Euro (2026 Monies)	€91,319
Blended Daily Rate (based on 220 days)	**€415**

€415 will be used for all relevant parties in the calculation.

2.1.2. Bank charges

Based on current information and market conditions, bank charges are estimated at approximately €5 per transaction in 2026

2.1.3. Processing time

1. Consider the following assumption for a rough estimate of the time required for **External Data Providers** to complete the following activity:

    - Provide Corrected Data (3 hours)

2. Consider the following assumptions for a rough estimate of the time required for **Participants** to complete the following activities:

    - Downloading and reconciling settlement statements, reports and documents (0.5 hours);

    - Create and authorise payments (0.5 hours);

3. Consider the following assumptions for a rough estimate of the time required for the **MO** to complete the following activities:

    - SEMO finance checks (1 hour);

    - Authorisation of payments (1 hour);

4. Consider the following assumptions for a rough estimate of the time required for **the MO** to complete the following Settlement Reruns:

    - Scheduled runs: M+4 and M+13 with Instruction Profiler (4.5 hours);

    - Ad Hoc run with Instruction Profiler (15.5 hours);

The recommendation in 2017 did not consider the additional work required as a result of a data update (other than metering) that causes a difference between €15,000 and €50,000, prior to the final Timetabled Settlement Run. Such differences would require the MO to run the Instruction Profiler during M+4 or M+13 processing, which is not part of standard resettlement processing.

This would not have as significant an impact on participants, as they would be processing the M+4/M+13 settlement documents regardless.

3. Approach

3.1. Input data

- A resource costing €415 per day. Hourly rate of €51.88;
- 218 market participants will receive multiple reports for each settlement day within a billing period.
- Bank charges €5 per transaction; Only 154 participants are subject to such charges, due to Settlement Reallocation Agreements (SRAs).
- Processing time assumptions as outlined in section 2.1.3

3.2. Process steps

Costs to external data providers:

- Provide Corrected Data (3 hours @ €415 per day)
- **Total Costs: €155.63**

Costs to each Participant:

- Downloading and reconciling settlement statements, reports and documents (0.5 hours @ €415 per day);
- Create and authorise payments (0.5 hour @ €415 per day);
- Bank charges (€5 by 154 participants)
    - **Total Costs: €12,078.75**

Costs to the MO (not related to Settlement Rerun processing):

- Corporate finance checks (1 hour @ €415 per day);
- Authorisation of payments (1 hour @ €415 per day);
- Bank charges (€5 by 154 participants)
    - Total Costs: **€873.75**

Costs to the MO related to processing Settlement Reruns:

- Scheduled runs: M+4 and M+13 with Instruction Profiler (4.5 hours @ €415 per day);
    - Total Costs: **€233.44**
- Ad Hoc run with Instruction Profiler (15.5 hours @ €415 per day);
    - Total costs: **€804.06**

Total Cost of the above: <u>€14,145.63</u>

4. Recommendation

It is recommended that the Settlement Recalculation Threshold should remain at €15,000.

One of the main considerations in setting the SRT is that it remains at a level above the estimated administrative cost of running settlement ensuring that any correction exceeding the threshold delivers a net benefit when compared to the cost of processing it. Following the completion of the M+13 run, the cost of initiating an Ad Hoc rerun has increased from approximately €11,000 historically to an estimated €14,000. This reflects the combined impact of a significant increase in market participants, rising labour costs, but also efficiencies gained through system improvements and automation.

Since January 2024, SEMO has issued over 26,500 Settlement Documents to individual participants. Approximately 50% of these documents have a net value of €15,000 or less. As this is a net value, there may be settlement issues within these documents with a material impact that exceeds the SRT. However, as half of all Settlement Documents issued have a net value that aligns with the current SRT it may be prudent to maintain that level. An increase to the SRT would limit participants' entitlement to availing of Settlement Rerun when they have incurred a financial loss.